



Transport
Canada Transports
Canada

TP 6980E

Issue 2/2005



**AGING
AIRCRAFT
Part IV**

feedback

Canadian Aviation Service Difficulty Reports

table of contents

HANGAR NOISE	inside cover
FIXED WING	1
ROTORCRAFT	6
ENGINES	7
EQUIPMENT	8
SUSPECTED UNAPPROVED PARTS	9
EQUIPMENT ADs	9
FEATURE ARTICLE	10
FAA SAIBs	12
FAA UNAPPROVED PARTS (UPNs)	13
SDR LIST	16

hangar noise

A Message for Aircraft Maintenance Personnel

INTRODUCING.....

Continuing Airworthiness Web Information System (CAWIS)

Requests from both registered aircraft owners and Transport Canada (TC) personnel for an Internet/Intranet based computerized airworthiness system have resulted in the development of this site.

It is mainly for the use by registered owners, operators, maintainers and manufacturers of Canadian registered aeronautical products or products for which Canada is the Country of Type Design responsibility, as well as Transport Canada personnel.

External clients can utilize this site to:

- Submit their Annual Airworthiness Information Report (AAIR) (After May 11, 2005)
- Query the Airworthiness Directive (AD) (foreign & domestic) database
- Review the data pertaining to their own aircraft

Internal clients (TC personnel)

- CAWIS has replaced the Computerized Airworthiness Information System (CAIS). CAWIS offers several convenient enhancements.

Fast, Convenient, Confidential

Visitors to this site can search the AD database using the "Quick Query" or "Advanced Search" Functions available by selecting the "Airworthiness Directives" link located directly on this specific page.

AAIR submission requires the registered aircraft owner to logon to CAWIS using the AAIR Access Code that is indicated directly on the top right corner of the AAIR form that is mailed to you by TC.

Confidentiality

This system has been designed to ensure that information pertaining to the registered owner's identity, along with personal information, remains confidential.

Check it out at:

<http://www.tc.gc.ca/aviation/applications/cawis-swimn>

For more information or copies of **feedback** or other Civil Aviation publications, call 1 800 305-2059 or visit our Web site at www.tc.gc.ca/civilaviation/certification.

To ensure continued delivery, send any address changes to:

Transport Canada, Civil Aviation Communications Centre (AARC), Place de Ville, Ottawa, ON, K1A 0N8.

Copyright - Minister of Public Works and Government Services, Canada, 2005

Permission is granted by the Department of Transport, Canada, to copy and/or reproduce the contents of this publication in whole or in part provided that full acknowledgement is given to the Department of Transport, Canada, and that the material be accurately reproduced. While use of this material has been authorized, the Department of Transport, Canada, shall not be responsible for the manner in which the information is presented, nor for any interpretations thereof.

The information in this publication may not be updated to reflect amendments made to original content. For up-to-date information, contact the Department of Transport, Canada.

The information in this publication is to be considered solely as a guide and should not be quoted as or considered to be a legal authority. It may become obsolete in whole or in part at any time without notice.

Notice/Disclaimer:

Service Difficulty Reports (SDR) are normally published verbatim. Transport Canada assumes no responsibility for the accuracy or content of any of these reports. Only grammatical or spelling errors are corrected and content may be reduced as well as personal references deleted.

Cette publication est aussi disponible en français.

fixed wing

BEECH C90

Pulley Spring Pin Shifted



The primary cable for the elevator control had jumped out of its respective pulley. The "spring pin", P/N NAS 427K6, that prevents this from happening was out of position, and therefore was unable to stop the cable from leaving the pulley.

This defect subsequently caused abrasion of the elevator cable on the surrounding support structure. The support structure is a short distance from where the elevator cable emerges from the pressure vessel as it travels aft to the bellcrank.



SDR # 20041123001

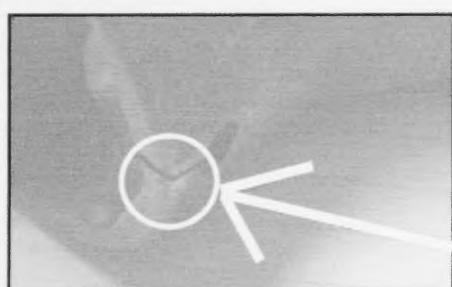
BEECH D95A

Elevator Horn Cracked



The operator noted that the elevator skin at the control horn attach point was cracked. Further inspection of the control horn assembly, P/N 956100054, revealed a 1-inch crack emanating from one of four elevator horn mounting bolts. The elevator control fitting was replaced.

The submitter carried out a fleet inspection using visual and eddy current inspection and no further defects were found. Transport Canada reminds maintainers to be vigilant while inspecting this area. ☈



SDR # 20050127002

BEECH B200C

Frame Structure Cracked

During a routine inspection, a crack was found propagating from an oval hole in the right hand frame at station 207.125, half way between the floor and the window. The crack was approximately 1½ inches long and extended from the eleven o'clock position of the lightening hole to a rivet on the reinforcement plate.



Transport Canada reminds maintainers to keep this defect in mind while inspecting this area and other manufacturing lightening holes for cracks.

No P/N Available. ☈

SDR # 20050117001

BOEING 727 233**Slat Actuator Failed**

SDR # 20040913007



During departure, the crew observed a continuous slat indication problem. The aircraft returned to the airport and made an uneventful landing.

Maintenance personnel investigated and found that the #5 slat rod end bearing had separated from the piston and caused damage to the slat.



The actuator and slat assembly was replaced and the aircraft was returned to service. The submitter stated that the rod end bearing was enclosed in a shrink sleeve and this may have hidden the impending failure of the rod end.

An air operator fleet campaign inspection has been initiated on the remaining aircraft.

**BOMBARDIER CL215 6B11(CL415)**

SDR # 20050228002

Wheel Dowel Pins Cracked

During a tire change, an inspection was being carried out on the wheel, P/N 215850026. Six (6) of the dowel pins, P/N 20209, used to align the rim halves were found sheared or cracked.

The cause is undetermined but this is a good reminder to complete a thorough inspection at each tire change. ☺

BRITISH AEROSPACE BAE 146 200**Nose Landing Gear Assistor Spring Assembly Failed**

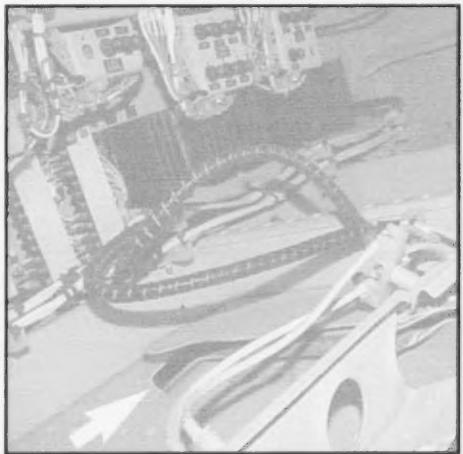
SDR # 20040610014

Shortly after departure and during landing gear retraction, the crew heard a loud noise under the flight deck. Following landing, an inspection of the nose landing gear area and wheel well area was carried out. It was then discovered that the nose landing gear assistor spring, P/N HC323L0001000, had failed.

Further investigation revealed that the broken assistor spring had punctured a hole, approximately 8" by 12" in size, through the floor of the flight deck.

The damage was repaired and the aircraft was returned to service. A fleet inspection revealed that one other aircraft had significant cracking on both internal tube assemblies. The tube was cracked almost entirely around its circumference. Both of these aircraft had logged approximately 32 000 cycles.

The cause of these events appears to be a lack of lubrication and metal fatigue.



Damage caused by broken assistor spring

Transport Canada recommends that maintenance personnel pay particular attention to this area. ☺

CESSNA U206C

SDR # 20041110012

Nose Strut Assembly Bolt Overstressed

A bolt, P/N NAS464P5A42, installed on the nose strut assembly of a Cessna U206, sheared on landing causing the nose gear to pivot forward. The failed bolt was last changed 9 September 1994 at 2 875 hours total time since new (TTSN). This aircraft has been operating on skis and the submitter suspects the bolt was overstressed in this configuration. The bolt appears to have been cracked prior to failure. Some damage to the airframe was encountered.

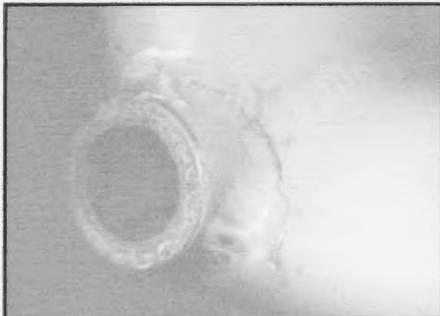
The submitter added that the inspection of this bolt is not referenced in the inspection schedule.

TTSN: 6 238.7 hours.

Aircraft operating on skis or floats usually require additional maintenance. Operators need to amend their maintenance schedules to reflect this type of operation. ☈

CESSNA 208B

SDR # 20050201002

Engine Mount Ring Cracked

During routine maintenance, the engine mount ring (horse collar) was found cracked at two of the four attachment points. An additional task card, initiated in 1999, to check for this condition every 100 hours, was added to our maintenance schedule, and, as a result, we have discovered the condition on 12 separate collars. The collar was replaced and the aircraft released.

This problem has been around for sometime and is traced back to faulty shimmy dampers. Close inspection of the horse collar should be carried out periodically particularly when the aircraft has experienced a nose wheel shimmy problem. FAA AD 90-05-04 is available to operators at:

<http://www.tc.gc.ca/aviation/applications/cawis-swimn/awd-lv-cs1401.asp?lang=E&rand=1>

If the corrective action offered in the supporting documentation does not adequately address the defect, please report this via the SDR program. ☈

CESSNA 208B

SDR # 20050223004

Wing Strut Attachment Bolt Cracked

During corrosion protection corrosion control (CPCP) and the supplemental inspection document (SID) inspection, the wing lower attach strut bolt and nut were removed for inspection and the nut was found fractured through.

The cotter key should hold the nut/bolt in place. The fracture was located through the manufacturer's identification stamp on the outer surface.

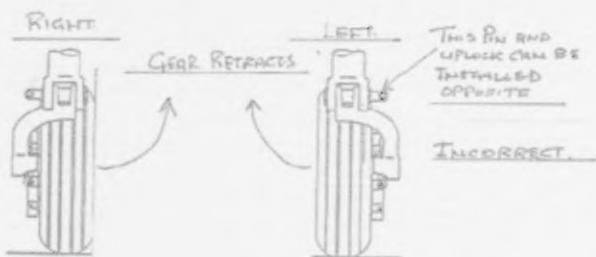
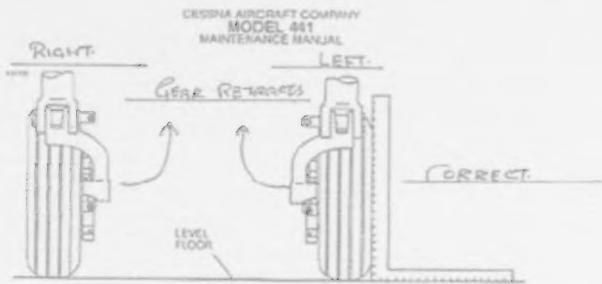


CESSNA 441SDR #
20050201002**Installation of MLG Trailing Link Reversed**

The main landing gear (MLG) was removed for modification. During re-installation, the trailing link for the left MLG was installed on the right MLG, and the trailing link for the right MLG was installed on the left MLG.

This error was not obvious during landing gear functional retraction and extension testing. The gear retracted and locked up normally - extended and locked down normally. The aircraft flew with no loss of airspeed or any indication of airframe buffet due to the trailing links hanging below the wheel wells. Once detected, the configuration was reversed and the aircraft returned to service.

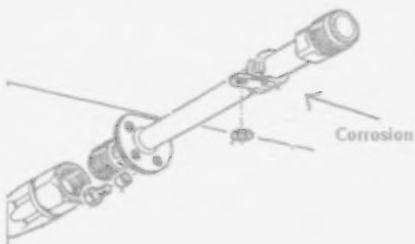
The submitter also indicated it is very easy to make this assembly error, which results in a landing gear configuration most technicians would think - "could not happen". ✕

**DE HAVILLAND DHC-2****Elevator Trim Control Rod Failure**

SDR # 20050303011

During climbout, the pilot experienced a slight "thump" through the elevator control system, and a minor vibration, which stopped when level flight was achieved. The flight continued to destination where maintenance was available. The pilot noted that more elevator trim than normal was needed to achieve level flight. After an uneventful landing, maintenance investigation revealed that the L/H elevator trim rod (P/N C2-T47A) had failed at the aft end in the steel threaded section. Close examination of the break revealed that the rod had been bent and cold straightened at some point, initiating a crack. This could have been caused by "dock handling" or a frozen trim tab. The rod was replaced and the aircraft was returned to service.

Something to think about when applying the quick fix . ✕

**DE HAVILLAND DHC-6 100****What's That Smell?**

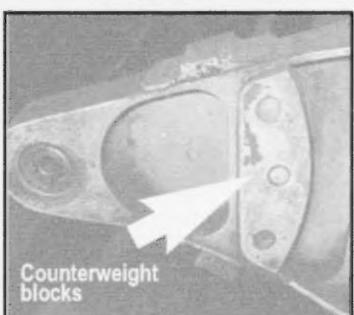
SDR # 20050207001

Investigation into a "fuel smell in the cabin" and a minor external fuel leak revealed that the welded fuel tube assembly, P/N C6PF10761, between the fuel tank and the flex hose to the wing strut, was leaking.

Removal of the Adel clamp revealed corrosion pits underneath, with associated fuel seepage. Investigation into the opposite side assembly revealed a similar condition, but the corrosion was not advanced enough to cause a leak. Both tube assemblies were replaced and the aircraft returned to service.

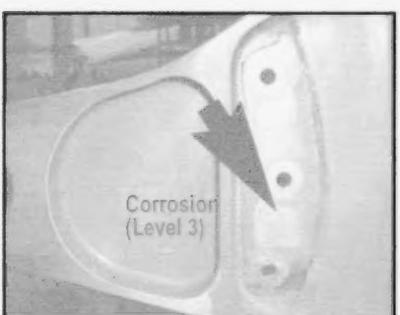
DE HAVILLAND DHC-6 300

SDR # 20050224007

Counterweight Block Corrosion

While inspecting the centre hinge bracket of the horizontal stabilizer for cracks, as per Manufacturer's Service Bulletin 6/512, corrosion was found under the counterweight block, P/N C6TP1026-27, and was visible on the surface surrounding the block. When the blocks were removed for further inspection, exfoliation corrosion was found under both sides.

The manufacturer's "Inspection Requirements Manual" addresses the inspection of this item every 1200 hours for condition, corrosion, fasteners for security, bearing for condition and flange for fatigue cracks. Canadian Airworthiness Directive CF 92 05 addresses the mandatory inspection for cracks, in accordance with the manufacturer's service bulletin 6/512.



The operator took the initiative to investigate the visible corrosion found during his inspection of the centre hinge bracket. In doing so, he uncovered corrosion to be of significant enough nature (Level 3), which required replacement of the part. ☹

DE HAVILLAND DHC-8 400

SDR # 20050317002

Main Landing Gear Emergency Release Cable Chafed

While accomplishing scheduled maintenance, of the main landing gear area, the operator noticed emergency release cable P/N 48502-3 badly chafed. The chafed cable was located in the left hand nacelle. Inspection of the cable in the right hand nacelle was completed without any findings. The operator is carrying out a fleet inspection to identify any other such occurrences.

**FOKKER F28 MK 0100**

SDR #20040827005

Auto-Fuel Transfer System Defective

Shortly after take-off, the control tower advised the cockpit crew that a vapor trail was coming from the wing area. The crew returned to the airfield and noted that a loss of 2000 lbs of fuel had been exhausted overboard in a very short time.

Initially, maintenance attributed this incident to a faulty fuel connector for the pilot valve. It was also initially suspected that the manually controlled power switch at the main fuel control panel was inadvertently kept energized when the fuel panel access door was closed. This is safety redundant feature to the manual fuel switch and activates a cam to de-energize a switch and is designed to prevent wing fuel spillage when the fuel access door is closed.

However, maintenance personnel later determined that the combined processor totalizer (CPT), P/N 0106KP02-022, S/N XD9971, was the cause of this particular event. The defective CPT had erroneously transferred fuel from the centre tank to the wing tank through the auto-feed system.

As a precautionary measure, the fuel control panel was also replaced.

PIPER PA 31

SDR # 20050130001

Severe Nose Gear Vibration

A severe vibration developed when the nose tire touched the runway. Steering was not available, but directional control was maintained with rudder input. As the aircraft slowed the vibration eased. Turning to exit the runway was accomplished by using differential engine power. When the aircraft was shut down, it was discovered the bolt, P/N AN 17413, holding the upper and lower nose scissor links together, was missing and the links were disengaged. Damage to the nose gear assembly was limited to the tire.

The parts were never recovered. Therefore, it could not be determined if the bolt or the locking pin had failed. ☹

SWEARINGEN SA227TC

SDR # 20050113006

Runway Debris - Aircraft Damaged

Shortly into the take-off roll, a foreign object struck the left propeller and severed off a 3-inch portion of the propeller tip. The take-off was successfully aborted.

Subsequent inspection revealed that a section of the propeller tip penetrated the fuselage just behind and below the airstair door. Additionally, a 3-inch hole was found on the opposite right propeller spinner. Smaller sized stones (aggregates) were found within the spinner.

During winter operations, it is suspected that this damage was caused by the larger sized (1.5 inch) aggregates that were spread on the runway rather than the much smaller and finer aggregates.

**rotorcraft****BELL 206B**

SDR # 20041223005

Pitch Link Cracks

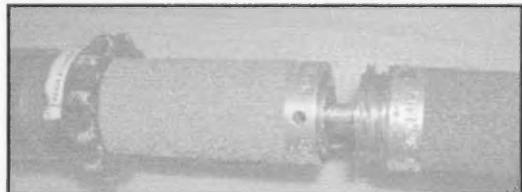
During a scheduled 100-hour inspection, an operator discovered two (2) vertical cracks on a main rotor pitch link. The cracks discovered were approximately .180 inches in length.

**BELL 212**

SDR # 20050125017

Collective Tube Assembly Cracked

The AME was preparing to grease the swashplate. To access some of the zerk fittings, it is easier to lift up the collective control stick. The AME was moving the collective control stick up when the ridged tube, P/N 212001181001, bent and broke in two. The breakage occurred between the two throttle grips where there is a slot in the tube for the throttle control.



engines

AVCO LYCOMING TIO-540-J2BD (PIPER PA31 350)

Engine Power Lost

SDR # 20041216009

Shortly after departure, the RH engine gradually began to lose power. The pilot shut down the engine and carried out an uneventful landing.

Initial inspection of the faulty engine found that all the teeth on the crankshaft drive gear, P/N LW10284, were missing. Further investigation revealed a broken distributor block, P/N 10 682046, which allowed the distributor gear to jump causing the engine to run progressively out of time. This would explain the gradual loss of engine power as described by the crew. The damage to the crank gear is thought to be collateral damage.

It is unknown how many hours are on the distributor block. However, the design of the distributor cap and ignition leads can impose substantial loads on the distributor block during cap removal and re-installation.

It is possible that maintenance personnel, while working in this area, may have inadvertently induced undue stresses causing a crack on the distributor cap. ✕

GARRETT TFE731 (Falcon 900B)

SDR # 20041119008

Primary Fuel Manifold Feed Line Damaged



During a scheduled oil pump replacement, severe wear was found on the primary fuel manifold feed line located near the fuel flow transmitter. Due to a lack of clearance, contact between the fuel flow transmitter inlet "B" nut and the feed lines caused the damage.

Most of this damage was caused by the cutting action of the "B" nut as it was tightened during installation of the fuel flow transmitter, which had been removed some time earlier for engine overhaul. Two of the three engines on this aircraft had similar damage.



It is possible that maintenance personnel caused this damage during installation. Falcon 900 maintainers should carry out a visual check in this area for chafed or damaged fuel lines. ✕

GARRETT TPE33110UA (Swearingen SA226TC)

SDR # 20050308010

Engine Control Centre Shaft

Upon climb out, the right engine began to surge with no response from power lever inputs. The pilot elected to carry out a precautionary shutdown and completed an uneventful landing.

Upon inspection of the engine area, the engine control centre shaft (Christmas tree) was found disconnected from the propeller governor. It was then determined that the setscrew which secures the arm, P/N 863599-1C, located between the centre shaft and the propeller governor had "backed out". This allowed the arm to disconnect from the shaft.

Closer inspection of the setscrew revealed a flat spot on it where the shaft had been wearing into the screw, due to the fact it was loose. The linkages were re-installed and a engine run-up was carried out serviceable.

The FCU was changed as a precautionary removal.



PRATT & WHITNEY CANADA PT6A-34 (DHC 3)

SDR # 20050309012

Turbine Exhaust Duct Flange Cracked

A turbo-Otter operator reported finding a cracked exhaust port flange. The purpose of this flange is to prevent leakage of exhaust gases between the turbine exhaust duct and the exhaust stack.

The crack was approximately 320 degrees around the circumference of the flange. The attachment flange itself was serviceable but the attached lip was the location of the defect.

The opposite exhaust flange was also found cracked to a lesser degree, approximately 120 degrees in circumference.

The submitter recommends that the exhaust stack be removed at the 100-hour inspection to facilitate a closer visual inspection of this area.



equipment

GRIMES MANUFACTURING COMPANY

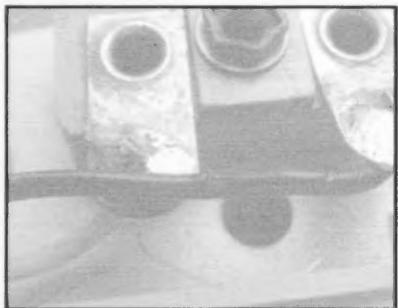
SDR # 20041208001

Battery Pack Assembly Failed

The emergency light battery pack, P/N 6104781, was removed due to inoperative emergency lights at the ceiling first three positions.



During overhaul of the battery pack, it was found that the pack had shorted out. It appears that during the last cell replacement, the connection leads were cut too short, which prevented the correct routing of the wires. When the pack was installed on the aircraft, the wires became pinched and the pack shorted out. The pack was installed one month prior to the failure.



This battery pack is installed in several different aircraft models and has been existence for many years. Transport Canada reminds AMO's that these battery packs need to perform when required. Proper overhaul and assembly is critical for reliability. *

Notice/Disclaimer

"Service Difficulty Reports (SDRs) are normally published verbatim. Transport Canada assumes no responsibility for the accuracy or content of any of these reports. Only grammatical or spelling errors are corrected and content may be reduced as well as personal references deleted."

suspected **Unapproved PARTS**



There were no Service Difficulty Reports (SDRs) received between 1 January and 31 March 2005 that indicated any suspected unapproved parts.

In Canada, SUPs should be reported (CAR 591.01) indicating your suspicion of an unapproved part on a regular SDR form or on the Internet at:

www.tc.gc.ca/wsdrs

equipment ADs

Transport Canada (TC) endeavours to send copies of new airworthiness directives (ADs), which are applicable in Canada to the registered owners of the affected products. Equipment/appliance ADs are often only distributed to our regional offices because the owners of aircraft affected by this type of AD are not generally known.

The following new ADs on equipment have been received by TC in the last three months. AMEs and operators of the affected products are encouraged to obtain further information or a copy of the ADs from their regional TC office, their local TCC, their PMI, or from the Civil Aviation AD website at:

<http://www.tc.gc.ca/civilaviation/certification/continuing/ad.htm>

Manufacturer	Ad Number	Origin	Description
AEROQUIP VICKERS	F-1988-132R2	FR	CANCELLATION NOTICE OF 88-132(AB)R1
AIR FILTERS	F-1990-229R3	FR	CANCELLATION NOTICE OF 90-229(AB)R2
GARMIN	2005-01-19	US	RECEPTION OF INACCURATE REPLIES DUE TO SUPPRESSION FROM GTX 330/330D MODE S TRANSPONDERS

CONGRATULATIONS...

...to Lynne M. Armistead who won our door prize at the Calgary symposium!!!!



AGING AIRCRAFT

Part IV

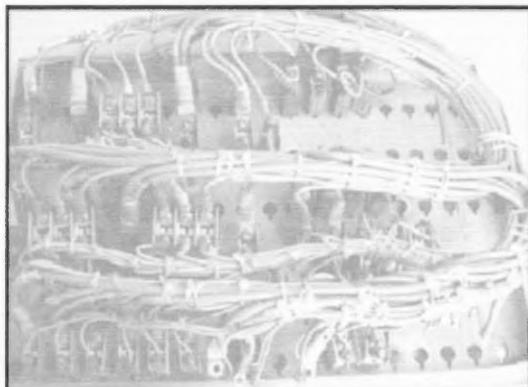
Ray Raoux, P.Eng. (ret'd)

RECAP

In earlier feedback articles, a description and the rationale for the development of Enhanced Zonal Inspections were discussed. A listing of commonly found wire-related concerns was provided and the benefits of maintaining a clean wiring system was promoted as the best means that is readily available to mitigate some wire-related concerns. However, cleanliness alone cannot prevent periodic wiring incidents from occurring as it is recognized that the aging of wiring can be as detrimental as the aging of structures, for which we currently have a better understanding. When one considers the length and size of wire bundles in transport aircraft, reliance on inspecting individual wire strands to detect degradation and faults becomes unrealistic; that is why extensive research activities are underway to detect wire degradation before it can lead to an incident or accident.

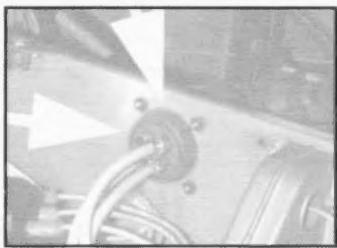
CIRCUIT BREAKER OPERATION

The approach taken to addressing structural concerns was that if a component needed to be inspected



B727 Wiring Panel

repeatedly to determine when specific deterioration [wear, cracking etc.] has occurred, it was deemed better to replace that component with a better one that was not prone to the same problem rather than continue with perpetual inspections. In the case of wire systems, the circuit breakers (CB) found on aircraft are designed to function in a similar manner to those found in homes; when the current draw becomes too high [such as due to a short circuit], the temperature of the conducting portion of the wire heats up and trips the breaker, thus preventing further current flow in the wire system. If a potential ignition source can be shutdown before combustion occurs, a subsequent fire can be prevented. Current CB design is not capable of responding to intermittent arcing such as can occur when the insulation has a nick, is frayed or its electrical impedance has deteriorated due to aging; in such situations, the current draw is not high enough to trip the CB, but an ignition source remains active.



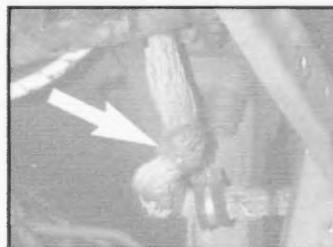
DHC 8 unprotected AC feed wires inside contactor box

ARC FAULT CIRCUIT BREAKER

Research activity is being directed to the development, testing and certification (DTC) of arc fault circuit breakers (AFCBs) for aircraft use. In addition to protecting the wiring system from overload and short circuit conditions that a standard CB is designed to do, an AFCB incorporates software to analyze the current flow characteristics so as to detect changes such as short and intermittent current spikes that would not otherwise trip a CB. This way, an AFCB should be able to shut down an ignition source before the onset of combustion, thus

preventing more serious damage from occurring.

The development of an AFCB is not a new discovery as they have been incorporated into recently built homes. However, the challenge has been to develop them into a small enough size to replace the CBs that are currently in aircraft without requiring the redesign of the aircraft's wiring circuitry. On a trial basis, AFCBs have been incorporated into non-essential circuits of various transport category model aircraft as part of the DTC process. The ultimate goal will be to see AFCBs



Excessive bend radius on wire bundle

becoming part of the design for new aircraft and to be selectively incorporated into the circuits of current aircraft.

The design and usage of CBs have also been subjected to review. As described, CBs have been designed for the purpose of shutting-off current under specific conditions; yet it has been found that they often have been used as an on/off switch, an application not addressed by maintenance requirements. The effects of aging have been found to affect their reliability. Accordingly, the need to periodically test CBs, to develop replacement schedules and to redesign circuitry with an appropriate switching device is being considered. The in-flight resetting of CBs has come under scrutiny with guidelines being produced stating when a CB may be reset. The concern is to ensure that reapplying power to a circuit, by flight crew resetting the CB, will not re-initiate arcing and lead to a fire that was just prevented from occurring when the CB initially tripped.

CONNECTORS

Connectors are a part of any wiring system and numerous studies have been carried out to reduce the snags that can be attributable to this part of the system. One of the major problems associated with connectors is corrosion on their electrical interfaces that can cause a particular component to non-function. In many instances, replacing an apparently non-functioning component will render the system serviceable; yet testing the removed component afterwards will fail to duplicate the reason for its removal, resulting in an unnecessary cost. It is postulated that the disconnection and reconnection associated with the replacement of a component is sufficient to remove corrosion on the electrical interfaces and restore the integrity of the circuit. Studies are underway to develop and qualify lubricant coatings for electrical interface surfaces that will offer a high degree

of corrosion protection and still maintain connector performance.

TEST DEVELOPMENT

Aging affects the capabilities of wire insulation just as it does the capabilities of aircraft structures. The insulation gradually embrittles making it more readily susceptible to cracking and wearing. The electrical characteristics also deteriorate, becoming less insulation-resistant and making them susceptible to disruptive electromagnetic interference. Humidity and hydraulic fluid can further contribute to insulation degradation. Studies are underway to correlate the effectiveness of the insulation with electrical and mechanical characteristics that can be readily measured. For example, an indentation test [which can be done in-situ on the aircraft] has been developed to correlate the depth of an indent with other mechanical properties and in turn electrical characteristics to determine the effectiveness of the insulation.

The overall objective is to develop a device [preferably handheld] that can be used by maintenance personnel to assess the condition of the wiring insulation to determine which wire or wire bundle or section of a bundle should be replaced. Various tests are being conducted to compare and evaluate the significance of electrical characteristic changes between new wires and similar wires that have been removed from aircraft to determine the best technologies for assessing the condition of wire insulation. In this regard, a handheld wire indenter has been developed to correlate indentation measurements



Lint Build-up

with other mechanical properties and ultimately the extent of wire degradation; this probably represents just the first of many devices based on current studies that will be offered to the aviation industry to address wiring concerns.

Despite all the new and additional procedures and equipment that are developed to maintain aircraft in an airworthy state, the skills of a well trained inspector will continue to be the foundation of a sound maintenance program. *

feedback feedback feedback

FAA Special Airworthiness Bulletins (SAIBs)

An SAIB is an information tool that alerts, educates, and makes recommendations to the general aviation community. It is non-regulatory information and guidance that does not meet the criteria for an Airworthiness Directive (AD).

<http://www.faa.gov/certification/aircraft/av-info/ad/saibs.asp>

NUMBER	MANUFACTURER	MODEL/DESCRIPTION	DATE
SW-05-25	Bell Helicopter Textron Canada	206B	01/10/2005
CE-05-26	LET Aeronautical Works	L-23 Super Blanik gliders	01/11/2005
CE-05-27	Cessna	P206, U206, 207, 210, P210, T210	01/20/2005
CE-05-28	Air Tractor, Inc.	AT-502, AT-502A, AT-502B, AT-503A	01/21/2005
CE-05-29	The New Piper Aircraft, Inc.	PA-28-140, -150, -160, -180, PA-28-235, PA-32-260, PA-32-300	02/01/2005
CE-05-29R1	The New Piper Aircraft, Inc.	PA-28-140, -150, -160, -180, PA-28-235, PA-32-260, PA-32-300	02/03/2005
NE-05-30	Pratt & Whitney	T8D series turbofan engines	02/03/2005
NM-05-31	Bombardier, Inc.	CL-600-2B19	02/04/2005
CE-05-32	AeroSpace Technologies of Australia Pty Ltd.	N22B, N22S, and N24A	02/11/2005
NE-05-33	McCauley propellers that BASCO may have serviced	Propellers installed on, but not limited to, Cessna 310P, 310Q, 310R, 320D, 320F, 335, 340, 340A, 401, 401A, 401B, 414, 414A, 421B, T310P, and T310Q	02/16/2005
NE-05-34	Curtiss-Wright R-1820 engines	Engine cylinders installed on model HU-16 (UF-1), SA-16A, S-2, TS-2A, and T-28 airplanes	03/01/2005
CE-05-35	Cessna Aircraft Company, The	402C, 414A	03/04/2005
CE-05-36	Raytheon Aircraft Company	Beech 45 (YT-34), A45 (T-34A, B-45), D45 (T-34B)	03/07/2005
SW-05-37	Arrow Falcon Exporters, Inc.; AST, Inc.; Firefly Aviation Helicopter Services; Garlick Helicopters, Inc.; Global Helicopter Technology, Inc.; Hagglund Helicopters, LLC; International Helicopters, Inc.; Precision Helicopters, LLC; Robinson Air Crane, Inc.; San Joaquin Helicopters Smith Helicopters; S. M. & T. Aircraft; Southern Helicopter, Inc.; Tamarack Helicopters, Inc.; US Helicopter, Inc.; Williams Helicopter Corporation Southwest Florida Aviation	HH-1K, TH-1F, TH-1L, UH-1A, UH-1B, UH-1E, SW204, SW204HP, SW205, and SW205A-1	03/17/2005
NE-05-38	Teledyne Continental Motors	(TCM) IO-240-B	03/18/2005
NE-05-39	Textron Lycoming Corp.	AEIO-360-A1B6, -A1E, -H1B	03/18/2005
NE-05-40	Textron Lycoming Corp.	AEIO-320, -360, -540, AIO-320, -360, HIO-360, IO-320, -360, -540, O-540-L3C5D, TO-360-C1A6D, -F1A6D	03/18/2005
CE-05-41	Single-Engine Piston Aircraft	Aircraft not equipped with a backup pneumatic power source	03/18/2005

NUMBER	MANUFACTURER	MODEL/DESCRIPTION	DATE
CE-05-42	Mooney Aircraft Company	M20 series	03/18/2005
CE-05-43	Sidney Conn (Balloon Works and Firefly Balloons, Inc.)	Firefly 11 hot air balloons	03/18/2005
CE-03-02R1	The New Piper, Inc.	PA-18	03/24/2005
SW-05-44	Rotorcraft	All US-Registered Rotorcraft	03/24/2005
CE-05-45	Burkhart Grob	Sailplane models Club Astir II, Standard Astir II, Speed Astir II, Speed Astir IIb	03/28/2005

FAA Unapproved PARTs Notification (UPNs)

Published by: FAA, AIR-140, P.O. Box 26460, Oklahoma City, OK 73125. UPNs are posted on the Internet at:
<http://www1.faa.gov/avr/sups/>

No. 2004-00076 issued January 18, 2005

AFFECTED PARTS

Alternators, generators, and starters.

PURPOSE

The purpose of this notification is to advise all aircraft owners, operators, manufacturers, maintenance organizations, and parts suppliers and distributors regarding improper maintenance performed on aircraft alternators, generators, and starters.

BACKGROUND

Information received during a Federal Aviation Administration (FAA) suspected unapproved parts investigation revealed that between August 2001 and February 2004, FLAC Industries, Inc., d/b/a Falcon Aircraft Accessories (FLAC), located at 4610 Fighter Aces Drive, Mesa, AZ 85215, improperly maintained and approved for return to service alternators, generators, and starters applicable to various types of aircraft. FLAC holds FAA Air Agency Certificate No. F8ZR871Y.

Evidence indicates that FLAC had approved for return to service starters, generators, and alternators with installed armatures, stators, and rotors that had been rewound without using FAA-acceptable or -approved data. Evidence also indicates that alternators had been approved for return to service without the replacement of parts, as required by current manufacturers' maintenance manuals.

The following table is a partial list of accessories that may have been improperly approved for return to service by FLAC.

Work Order Number	Return-to-Service Approval Date	Accessory Name	Manufacturer	Assembly Part Number	Assembly Serial Number
2361	10/17/03	Alternator	Electrosystems	ALX-8521LS	B100153
2362	09/05/03	Alternator	Electrosystems	ALX-6521LS	A122878
2472	10/29/03	Alternator	Prestolite	ALY-6522R	A111181
2503	11/10/03	Alternator	Electrosystems	ALX-9524	A041962
2547	12/30/03	Generator	Delco	1101912	FA811A
2564	12/17/03	Alternator	Prestolite	ALY-6421	FA822A
2577	12/22/03	Starter	Prestolite	MCL-6501	9K000023
2581	12/23/03	Generator	Delco	1101898	FA827A
2593	12/29/03	Starter	TCM	646238	A04239903
2594	12/29/03	Starter	Prestolite	MZ-4204	FA839A
2595	12/30/03	Alternator	Prestolite	ALY-6421	FA840A
2598	12/30/03	Alternator	Prestolite	ALY-8420	FA842A
2598-1	12/31/03	Starter	Prestolite	MHB-4018	A149604
2599	01/02/04	Alternator	Ford	DOFF10300B	FA843A

Work Order Number	Return-to-Service Approval Date	Accessory Name	Manufacturer	Assembly Part Number	Assembly Serial
2682	02/03/04	Alternator	Ford	DOFF10300J	FA873A
2700	02/10/04	Starter	Delco	1109657	4730
2701	02/10/04	Starter	Delco	1109657	9315
2564	12/17/03	Alternator	Prestolite	ALY-6421	FA822A
2577	12/22/03	Starter	Prestolite	MCL-6501	9K000023
2581	12/23/03	Generator	Delco	1101898	FA827A
2593	12/29/03	Starter	TCM	646238	A04239903
2594	12/29/03	Starter	Prestolite	MZ-4204	FA839A
2595	12/30/03	Alternator	Prestolite	ALY-6421	FA840A
2598	12/30/03	Alternator	Prestolite	ALY-8420	FA842A
2598-1	12/31/03	Starter	Prestolite	MHB-4018	A149604
2599	01/02/04	Alternator	Ford	DOFF10300B	FA843A
2682	02/03/04	Alternator	Ford	DOFF10300J	FA873A
2700	02/10/04	Starter	Delco	1109657	4730
2701	02/10/04	Starter	Delco	1109657	9315

RECOMMENDATIONS

Regulations require that type-certificated products conform to their type design. Aircraft owners, operators, manufacturers, maintenance organizations, and parts suppliers and distributors should inspect their aircraft, aircraft records, and/or parts inventories for any alternators, generators, or starters approved for return to service by FLAC. Suspect products and parts installed on aircraft should be inspected for conforming to type design. If any are found in existing stock, it is recommended that the products or parts be quarantined to prevent installation until a determination can be made regarding each part's eligibility for installation.

FURTHER INFORMATION

Further information concerning this investigation and guidance regarding the above-referenced parts may be obtained from the FAA Flight Standards District Office (FSDO) given below. The FAA would appreciate any information regarding the discovery of the above-referenced parts from any source, the means used to identify the source, and the action taken to remove the parts from aircraft and/or stock.

This notice originated from the FAA Scottsdale FSDO, 17777 N. Perimeter Drive, Suite 101, Scottsdale, AZ 85255, telephone (480) 419-0330, fax (480) 419-0800; and was published through the FAA Suspected Unapproved Parts Program Office, AVS-20, telephone (703) 668-3720, fax (703) 481-3002.

No. 2004-00210 issued February 1, 2005

AFFECTED PARTS

R-1820 engine cylinders.

PURPOSE

The purpose of this notification is to advise all aircraft owners, operators, manufacturers, maintenance organizations, and parts distributors regarding improper maintenance performed on R-1820 engine cylinders.

BACKGROUND

Information received during a Federal Aviation Administration (FAA) suspected unapproved parts investigation revealed that West Coast Cylinder Works (West Coast Cylinder), located at 13907 Marquardt Avenue, Santa Fe Springs, CA 90670, improperly maintained R-1820 engine cylinders. West Coast Cylinder previously held Air Agency Certificate No. YO3R005M.

Evidence indicated that West Coast Cylinder failed to perform Fluorescent Penetrant Inspection (FPI) on certain R-1820 engine cylinders, as required by its approved process specification. The affected cylinders were either sold as spare parts or installed on engines subsequently overhauled and approved for return to service by Airpower, Inc., an FAA-certified repair station (NS3R721L), located at 4745 Highland Springs Road, Lakeport, CA 95453.

The table below presents a partial list of cylinders that may have been improperly approved for return to service by West Coast Cylinder.

ENGINE S/N	CYLINDER S/N (AIRPOWER, INC.)	AFFECTED AIRCRAFT
BL510087	AP 5111, 5112, 5114, 5116, 5121, 5123, 5124, 5126	Grumman Albatross
BL515782	AP 5021	Grumman S-2
BL516585	AP 3753, 3758, 3764, 4497, 4869, 4883	Grumman S-2
BL516700	AP 2595, 4973, 4995	Grumman S-2
BL520708	AP 3401, 4800, 4816, 4842, 4910	North American T-28
BL520779	AP 3037	North American T-28
PC10037	AP 2139, 5036, 5038, 5039, 5041, 5042, 5051, 5052	Grumman S-2
PC10045C	AP 3323, 5059, 5066, 5068, 5074, 5077, 5078, 5079	Grumman S-2
PC10098C	AP 5001, 5003, 5004, 5005, 5006, 5022, 5024, 5025	Grumman S-2
PC10179C	AP 5034, 5035	Grumman S-2
PC10184C	AP 5044, 5065, 5069, 5075, 5076	Grumman S-2
PC10223	AP 5037, 5040, 5043, 5056, 5057, 5060, 5062, 5064	Grumman S-2
PC10245C	AP 4867, 4902, 4907, 4909	Grumman S-2
PC10259	AP 2975, 4980, 4985	Grumman S-2
PC10268C	AP 2978, 4908, 4911, 5071	Grumman S-2
W507451	AP 4988, 4989, 4990, 4991, 4992, 4993, 4994	DC-3
W507573	AP 4882, 4940, 4964, 4965, 4967	DC-3
W507589	AP 4498, 4937, 4966, 4969, 4970, 4972, 4974	DC-3

R-1820 Engine Cylinders Sold as Spare Parts:

AP 2976, 3030, 3336, 4130, 4636, 4806, 4866, 4868, 4870, 4912, 4924, 4930, 4931, 4932, 4933, 4934, 4935, 4936, 4937, 4939, 4941, 4942, 4953, 4977, 4978, 4996, 4997, 5054, 5061, 5063, 5073

RECOMMENDATIONS

Regulations require that type-certificated products conform to their type design. Aircraft owners, operators, manufacturers, maintenance organizations, and parts distributors should inspect their aircraft, aircraft records, and/or parts inventory for any cylinders approved for return to service by West Coast Cylinder. If any cylinders maintained by West Coast Cylinder have been installed on aircraft, appropriate action should be taken. If any are found in existing aircraft stock, it is recommended that the cylinders be quarantined to prevent installation until a determination can be made regarding their eligibility for installation.

FURTHER INFORMATION

Further information concerning this investigation and guidance regarding the above-referenced parts may be obtained from the FAA Flight Standards District Office (FSDO) shown below. In addition to the above recommendations, the FAA would appreciate any information concerning the discovery of the parts, the means used to identify the source, and the action taken to remove the parts from service.

This notice originated from the Los Angeles FSDO, 2250 East Imperial Highway, Suite 140, El Segundo, CA 90245, telephone (310) 215-2150, fax (310) 645-3768; and was published through the FAA Suspected Unapproved Parts Program Office, AVS-20, telephone (703) 668-3720, fax (703) 481-3002.

service difficulty reports

Received by Transport Canada from
1 January to 31 March 2005

MAKE/MODEL	JASC	PART NAME	PART NO.	PART CONDITION	SDR NO.	RGN	MAKE/MODEL	JASC	PART NAME	PART NO.	PART CONDITION	SDR NO.	RGN	
CANADAIR														
CL215 6B11(CL415) 0000		TRIM MOTOR	215900014		20050308016	NCR		560	0000	DOOR SEALS	99120754	LEAKING	20050315007	PAC
CANADAIR								560	0000	SOLENOID VALVE	66720	LEAKING	20050315008	PAC
CL215 6B11(CL415) 0000		FITTING HOR/STAB	215231096	APPARENT DEFECT	20050324010	QUE		560	2435	STARTER/GENERATOR	300SG42982	FAILED	20050104007	PAC
CL215 6B11(CL415) 2720		215T24296-8	215T2429080	BROKEN	20050120003	QUE		560	3160	RMU	7012100825	FAILED	20050104008	PAC
CL215 6B11(CL415) 3246		TIGE(DOWEL PIN)	20209	CASSIES	20050228002	QUE		560	3240	SHUTTLE VALVE ASSY	195183	UNSERVICEABLE	20050317006	PNR
CL215 6B11(CL415) 5240		ACTUATING BOLT	NAS428	CASSIE	20050118001	QUE		560	3242	Brake Assembly	21656	FAILED	20050104008	PAC
CL600 1A11(600) 3400		UPPER ELEC. BAY	6003303913	DISTORTED	20050125011	INT		560XL	0000	MAGNETO METER	501182601	FAILED	20050104008	PAC
CL600 2A12(601) 1000		COWL ANTI ICE VALVE	601970975	FAILED	3 SDRs	QUE		2910	UPLOCK SWITCH	65430087	FAILED	20050324009	ONT	
CL600 2A12(601) 2424		EXTERNAL POWER	720846D		20050222006	QUE		750	3213	HYDRAULIC LINE	661705213	CRACKED	20050120066	PNR
CL600 2A12(601) 3234		NLG SELECT VALVE	555405	PINS LOOSE	20050215010	INT				LINK PIN ASSY	67410172	CORRODED	2 SDRs	PNR
CL600 2A12(601) 3400		UPPER ELEC. BAY	6003303913	DISTORTED	3 SDRs	ONT								
CL600 2B16(601) 0000		LANDING GEAR CONTROL			20050324002	NCR								
CL600 2B16(604) 3320		FLUORESCENT LAMP	AL1235T490	BURNT ON END	20050127004	ONT								
CL600 2B19(RJ) 2120		SENSOR - DUCT	7546911	SEPARATED	20050112007	PAC								
CL600 2B19(RJ) 2400		AC UTILITY	D1822A		20050223013	NCR		340	0000	WINDOWPANE	34031103078	BLEW OUT	20050329014	PAC
CL600 2B19(RJ) 2420		IDG			20050115001	NCR		340	3213	AXLE			20050117006	PAC
CL600 2B19(RJ) 2611		APU												
CL600 2B19(RJ) 3213		MAIN LANDING GEAR	17002110	CRACKED/SEPERATE	20050120002	QUE								
CL600 2B19(RJ) 3251		RVDT			20050303009	QUE								
CL600 2B19(RJ) 3300		LIGHT BALLAST	BR900022		20050114001	QUE								
CL600 2B19(RJ) 4920		APU			20050312001	NCR								
CL600 2B19(RJ) 5210		BOLT	NAS620754D	SEIZED	20050215008	ATL								
CL600 2B19(RJ) 5610		WINDSHIELD	VAR		3 SDRs	VAR								
CL600 2B19(RJ) 5740		WING ATTACH FITTING			20050216006	PNR								
CL600 2B19(RJ) 7200		ENGINE			20050114002	QUE								
CL600 2B19(RJ) 7260		GEARBOX		MAKING METAL	20050226001	QUE								
CL600 2B19(RJ) 7313		FUEL NOZZLE INJECTOR			20050209007	NCR								
CL600 2B19(RJ) 7500		14TH STAGE DUCT		LOOSE	20050303007	QUE								
CL600 2C10(RJ) 2150		AIR CYCLE MACHINE	GG67095009	SEIZED	2 SDRs	QUE								
CL600 2C10(RJ) 2530		GALLEY FAN	GG670950283	SHORTED	20050303001	NCR								
CL600 2C10(RJ) 2824		EJECTOR	T99638601		20050310005	QUE								
CL600 2C10(RJ) 5315		CROSSBEAM	CG670341757	CORRODED/CRACKED	2 SDRs	QUE								
CL600 2C10(RJ) 5610		CAPTAIN SIDE WINDOW	NP1393225	SHATTERED	20050303002	VAR								
CESSNA														
A152	5511	L/H INBD RIB LEAD	043200146	CRACKED	20050308004	QUE								
A185E	0000	BRACKET	071349564	CRACKED	20050200001	PAC								
A185E	5510	REINFORCEMENT	07321014	CRACKED	20050225003	QUE								
A185F	0000	BATTERY			20050329012	PNR								
A185F	3210	GEARBOX	071349561	CRACKED	20050212007	PNR								
T210K	5551	DOUBLER AFT SIDE	12120031	CRACKED	20050302004	PAC								
T210N	8530	PISTON			20050120015	PNR								
U206C	5561	DOUBLER AFT SIDE	12120031	CRACKED	20050303003	PAC								
U206G	5412	BULKHEAD	12134121318	CRACK	20050305003	PAC								
152	0000	BRACKET	04320049	CRACKED	20050322003	PAC								
152	0000	L/H LEADING EDGE	043200146	CRACKED	20050308006	QUE								
152	0000	R/H LEADING EDGE	04320016	CRACKED	20050308006	QUE								
172L	3340	LAMP	4522	UNSERVICEABLE	20050310003	PAC								
172M	2820	LINE ASSEMBLY	050011874	WORN	20050218005	QUE								
172M	3250	BALL JOINT	C109	BROKEN	20050218006	QUE								
172M	5200	LOWER DOOR POST		CRACKED	20050310008	PAC								
172M	5753	INBD SUPPORT ARM	05239011314	WORN	20050204004	ONT								
172N	5200	DOOR POST LH		CRACKED	20050304003	PAC								
172N	5510	SPAR ASSY	053200198	CRACKED	20050202004	ONT								
172N	8530	CAMSHAFT/LIFTERS	LW165121LW16812	SPALLED LIFTERS	20050223011	ONT								
172S	2432	ALTERNATOR CONTACT	X610007	INTERNAL DAMAGE	20050308013	ONT								
172S	2730	ELEVATOR CABLE	0510105308	BROKEN STRANDS	20050121004	ONT								
172S	5511	SPAR ASSEMBLY	053200198	CRACKED	20050209004	QUE								
208B	2752	FLAP ACTUATOR	C1450046	WORN, BINDING	20060120012	PNR								
208B	5710	NUT	MS1782612	FRACTURED	20060223004	ONT								
208B	7120	ENG MOUNT RING	265102215	CRACKED	20060201002	ONT								
208B	7160	ENGINE	PT60114	SERVICEABLE	20050311005	PNR								
310R	2710	AUTOPILOT CLAMP	08615201	FAILED	20060224005	PNR								
310R	8520	ENGINE	I0520M	NO OIL PRESSURE	20050218011	QUE								
421C	3200	LANDING GEAR SYSTEM			20050118005	ONT								
425	2120	FLOW CONTROL VALVE	781904	FAILED	20050301005	ONT								
425	2121	FAN BLADE	09040022	FAILED	20050127006	ONT								
441	2160	BY-PASS VALVE	7547512	MOTOR FAILED	20050118004	PAC								
441	3213	MLG TRAILING LINE	5741405	WRONG PART	20050125006	PNR								
550	2435	BEARING, COMMUTA	03601018	DESTROYED	20050202005	ONT								
550	2822	LINE ASSEMBLY	652635637	WORN	20050314003	QUE								
550	3233	SWITCH	91929	FAILED	20050117002	ONT								
550	3340	ELECTRICAL CONNECTOR		BURNT PIN, WIRE	20050121001	ONT								
560	0000	DIRECTIONAL GYRO	402057723	FAILED	20050315009	PAC								

MAKE/MODEL	JASC	PART NAME	PART NO.	PART CONDITION	SDR NO.	RGN	MAKE/MODEL	JASC	PART NAME	PART NO.	PART CONDITION	SDR NO.	RGN
DHC 8 400	7310	FUEL OIL HEATER			20050307005	QUE	PC 12 45	2750	DRIVE ARM	527521214	BENT/CRACKED FAILED	20050310002	ONT
DHC 8 402	7220	ROTOR LP COMPRESSOR	304865101	ONE BLADE BENT	20050124012	QUE	PC 12 45	2750	FLAP	9787320309	WORN	20050303004	QUE
DIAMOND - CAN DOUGLAS	2752	SPLINE SEAL	UNKNOWN	LOOSE	20050225005	ATL	PC 12 45	2752	FLAP ACTUATOR	066031252500	GOOD	20050215013	ONT
DA 20 C1					20050124004	QUE	PC 12 45	3160	DISPLAY UNIT	5321012077	GOOD	20050107002	PNR
DC9 83	0000	NIL/UNKNOWN			20050201005	QUE	PC 12 45	3211	SPECIAL BOLT	9595601511	GOOD	20050224001	ONT
DC9 83	2350	AUDIO INTEGRATING			20050212004	QUE	PC 12 45	3242	MLG BRAKE		GOOD	20050216002	ONT
DC9 83	2913	ENGINE DRIVEN PUMP			20050121002	QUE	PC 12 45	3411	WIRING		GOOD	20050315011	ONT
DC9 83	3040	NIL/UNKNOWN			20050124009	QUE	PC 12 45	5530	VERTICAL STAB		GOOD	20050303012	ONT
DC9 83	3200	NIL/UNKNOWN			20050212002	QUE	PC 12 45	5610	FRESH AIR NOZZLE	9599121204	GOOD	20050303012	ONT
DC9 83	3220	NLG GROUND INTER			20050210002	QUE	PIPER						
DC9 83	3241	TRANSDUCER, ANTI-SKID			20050117004	QUE	PA28 140	0000	WING SPAR	6207007	CORROSION	20050329006	ONT
DC9 83	3244	NOSE WHEEL ASSY	95502675	OVER INFLATED	20050117004	QUE	PA31	2121	SWITCH	4878621CH214	DEFECTIVE/USE	20050223005	QUE
DC9 83	5210	LATCH	AM767BA	BROKEN	20050125014	QUE	PA31	2421	ALTERNATOR		GOOD	20050121008	PNR
DC9 83	5320	INTERCOSTAL	99118755	ORIGINAL	20050212008	QUE	PA31	2450	CIRCUIT BREAKER	5AMP	GOOD	20050110004	ONT
DC9 83	7200	ENGINE-TURBINE			20050308011	QUE	PA31	2910	PUMP-HYDRAULIC	1213HBG310	GOOD	20050106003	PNR
DC9 83	7711	ENGINE PRESSURE RATIO			4SDRs	QUE	PA31	3221	BOLT	AN17413	GOOD	20050130001	PNR
DC9 83	7920	OIL PRESSURE LINE	7938314501	CRACKED	20050308002	QUE	PA31	3242	HSI	40001728513	NEEDLE STUCK	20050124008	PNR
DC9 83	8012	START	VALVE39279621		20050103002	QUE	PA31	3250	ADAPTOR	5379700	GOOD	20050105014	PNR
EMBRAER							PA31	350	FUEL TANK	4617113	LEAKING	20050119010	ATL
EMB 110P1	6122	PROPELLER GOVERNOR	8210002	UNCONTROLLABLE	20050207002	ONT	PA31	3520	LINK	40336000	CRACKED	20050221005	PNR
EUROCOPTER FRANCE							PA31	3530	UP LOOK HOOK ASSY	4179702/03	FROZEN	20050128003	PNR
EC 120 B	5510	HORIZONTAL STABILIZER	C551S1101052	LOOSE MOUNT	20050216007	ONT	PA31	3540	CHANNEL	4070200	CRACKED	20050227001	PNR
EC 130 B4	5610	COPILOTS WINDSCREEN	350A/2500000	CRACKED	20050112001	ONT	PA31	3550	REL	437430001	SOCKETS WORN	20050227001	PNR
EC 130 B4	5630	SLIDING DOOR WINDOW	SPSEC130811	CRACKED	20050112003	ONT	PA31T	7320	HEATER FUEL REGU	A23D047	LEAKING	20050114004	ATL
FOKKER - ND							PA31T	0000	IB MLG DR ACT B	46357000001	CRACKED	20050329013	ONT
F.28 MK0100	1200	SERVICING			20050214004	QUE	PA31T	2436	VOLTAGE REGULATOR	PA31T	SOCKETS WORN	20050308019	ONT
F.28 MK0100	2100	AC SYSTEM			20050301007	QUE	PIPER AEROSTAR						
F.28 MK0100	2730	CONTROL UNIT ELEMENT			2 SDRs	QUE	PA60 600	0000	FORWARD INBOARD	220000021	CRACKED	20050225007	PNR
F.28 MK0100	2910	PACKING			20050104001	QUE	PA60 600	5530	INBOARD DOUBLER	220000033	CRACKED	20050225006	PNR
F.28 MK0100	3425	FLIGHT DISPLAY UNIT	6228047541	INTERNAL FAILURE	2 SDRs	QUE	ROBINSON						
F.28 MK0100	3810	WATER LINE			20050125004	QUE	R44	0000	INPUT YOKE SPLINE		DAMAGED	20050318001	PNR
F.28 MK0100	4950	APU BLEED AIR SYSTEM			20050125005	QUE	SAAB	3408	LANDING GEAR RET			20050113005	PNR
F.28 MK0100	5610	WINDSHIELD ASSY			2 SDRs	QUE	SD3 60	3230	FLEXIBLE PRESSURE	SD3730311	RUPTURED	20050104005	PAC
F.28 MK0100	7500	GASKET	EU15969	DAMAGED	20050222501	QUE	SIKORSKY	5302	LOWER WEB	S612066120	NA	20050104011	PAC
F.28 MK0100	7540	BLEED AIR INDICATOR			20050209003	QUE	S76A	0000	PRESSURE TRANSDUCER	7645001078120	NA	20050323001	PAC
FOUND BROS					20050218007	QUE	SWEEARINGEN						
FBA 2C1	0000	FINLET	V201	UNKNOWN	20050318002	ONT	SA226TC	0000	FUEL CONTROL UNIT	8978017	FAILED	20050317004	PNR
GRUMMAN - FR							SA226TC	7310	SHAFT	B99193	LOOSE	20050308010	PNR
GA 7	0000	BOLT	0690200	BROKEN	20050310001	PNR	SA226TC	7920	OIL FILTER ADAPTOR	8941172	CRACKED	20050105015	PNR
HARVAR'D							SA227AC	0000	NOSE GEAR ASSEMBLY			20050308017	ONT
2	0000	ROD ASSEMBLY	5252315	CRACKED	20050329011	ONT	SA227AC	0000	NOSE WHEEL STEERING			20050322007	ONT
2	0000	UNIVERSAL JOINT	1952642	WORN	20050329001	ONT	SA227AC	0000	PROP SHAFT BEARING	31028851	WORN	20050330000	ONT
HAWKER SIDDELEY-JUK							SA227AC	2612	FIRE DETECTOR	1734361450	FAULTY	2 SDRs	ONT
HS 748 2A	2730	LEVER ASSY - ELEMENT	2982C3096	CRACKED	20050310003	PNR	SA227AC	2910	FLAP UP HYD LINE	278100322040	CHAFED	20050308018	ONT
HS 748 2A	7310	PIPE ASSEMBLY	RK3458A	BROKEN	20050315002	QUE	SA227AC	3244	MAIN WHEEL TIRE	GOODYEAR	DISINTEGRATED	20050124013	ONT
HUGHES							SA227AC	5610	RH HEATED WINDSHIELD	219441004	SHATTERED	20050113007	ONT
3690	6210	MR BLADE	3690D21100523	U/S	20050306001	PAC	SA227AC	6113	PROPELLER	4HFR34C652	NA	20050113006	ONT
3690	6310	COUPLING	369H5660		20050215006	PNR	engines						
KAMOV							ALLISON						
KA32A11BC	6320	MAIN GEARBOX	BP252	CHIP LIGHT	2 SDRs	PAC	AE-3007A1/3	7230	ENGINE			20050107003	QUE
KA32A11BC	6710	BELLCRANK	D2A201030C	CRACKED	20050228012	PAC	250-C20	7250	TURBINE SECTION			20050314004	PAC
LAKE							250-C20	8012	START BLEED VALV			20050104010	PAC
LA 4	5510	LH FITTING	2220021	CRACKED	20050121005	ONT	250-C20B	0000	PC SAFETY VALVE	250954106	BROKEN	20050329015	PAC
LEARJET							250-C20B	7120	CHANNEL	206031302189	CRACKED	20050216008	ONT
35	3233	ACTUATOR	23271004	BY-PASSED	20050124001	QUE	250-C20B	7230	ADAPTER COUPLING	230397911	FRETTING/WEAR	20050308009	QUE
35	3244	TIRE	178K235	CUT	20050316006	QUE	250-C20B	7250	COUPLING	6870832G	CORRODED	20050225002	PNR
45	3243	Brake Control Unit	429333	FAILED	20050210001	QUE	250-C20B	8300	2 1/2 BEARING	6890914	NA	20050312002	PNR
45	5514	LOWER TORQUE LINE	4553301480003	U/S	20050224006	ONT	250-C30S	7250	TURBINE ASSEMBLY	23031925	NA	20050105005	QUE
45	7500	SWIVEL JOINT	42302200		20050217002	PAC	250-C47B	7240	COMBUSTION LINER	23064570	CRACKED	2 SDRs	PAC
LOCKHEED							AVCO LYCOMING						
C130A	5753	BEARING	CB17663	FAILED	20050106001	PNR	HO-360-C1A	7314	ENGINE DRIVEN FUEL	LW15473	LOOSE BOLTS	20050208007	ATL
382G	5740	DRAG ANGLE			20050214007	ONT	IO-360-C1C6	8520	CAMSHAFT	WORN	WORN	20050105007	ONT
MITSUBISHI - JN							LTO-540-J2BD	8520	CRANKCASE ASSEMBLY	11F20022D3	SUSPECT CRACKS	20060228009	PNR
MU 2B36	3242	MIXING VALVE	035A930011	CONTAMINATED	20050120001	PAC	O-320-B2C	7414	DISTRIBUTOR GEAR		TWO TEETH MISSING	20050105002	ONT
MOONEY	0000	TACHOMETER SHAFT	SL76121	SEPARATED	20050322001	PNR	O-320-D2J	7414	SLICK MAGNETO	4371	CRACKED	20050105001	PNR
PIaggio	0000	CABLE ASSY	90156104901	WORN	20050324011	ONT	O-320-E2D	8500	PRIMER LINE		NA	20050301010	PNR
P180 AVANTI	0000	TB-10	MS2721265	BURNED	20050307011	ONT	O-320-H2AD	8530	CAMSHAFT/LIFTERS	LW16512LW16812	SPALLED LIFTERS	20050223010	ONT
PILATUS - SW	PC 12 45	FLAP SYSTEM			20050324001	ONT							
PC 12 45	2435	GENERATOR	524321215		20050105009	ONT							

MAKE/MODEL	JASC	PART NAME	PART NO.		MAKE/MODEL	JASC	PART NAME	PART NO.	PART CONDITION	SDR NO.	RGN						
O-360-F1A6	8530	CYLINDER	LW12427	CRACKED	20050222010	PNR	PW123	7920	ENGINE	20050105010	QUE						
O-540-E4C5	8530	ENGINE	20050311002	PNR	PW123B	7250	ENGINE	20050105006	ATL								
TIO-540-A2B	8500	CONTROLLER	LW1064485	EXCESS WEAR	20050219001	PNR	PW123E	7250	INTER TURBINE AJ	20050209005	NCR						
TIO-540-A2B	8500	ENGINE	20050105004	QUE	PW124B	7830	ENGINE	20050124010	QUE								
TIO-540-J2BD	7414	MAGNETO BEARING	10382971	SEIZED	2 SDRs	PNR	PW125B	7312	FUEL HEATER	20050213008	QUE						
TIO-540-J2BD	8530	ENGINE	TIO540J2BD	CRACK CRANKCASE	20050218010	QUE	PW125B	7320	HYDROMECHANICAL	20050307003	QUE						
BOMBARDIER ROTAX																	
912 F3	1400	STARTING SPRING	AG852401	LOOSE	20050301002	PAC	PW127	7200	ENGINE	2 SDRs	QUE						
GARRETT																	
TF-731-2-2B	0000	OIL COOLER TUBE	991930726361	PUNCTURED/CHAFED	2 SDRs	QUE	PW127B	7230	ENGINE	20050323003	QUE						
TF-731-40R-200G	7200	ENGINE	20050321007	ONT	PW127E	0000	ENGINE	20050329009	QUE								
TF-731-58R-1C	7500	TRANSFER TUBE,	30748451	SEPARATED	20050124007	PAC	PW127F	7200	ENGINE	20050307007	QUE						
TP-E331-10UA	7900	OLY FILTER ADAPTOR	8941172	CRACKED	2 SDRs	PNR	PW150A	6100	TORQUE SHAFT	20050110007	QUE						
TP-E331-10UA	8300	PLANETARY CARRIE	8679225	CRACKED	20050307013	PNR	PW150A	7200	TORQUE TUBE	20050221006	QUE						
TP-E331-10UGR	2434	STARTER GENERATOR	23079009	FAILED	20050131004	PNR	PW150A	7230	ENGINE	200502124005	QUE						
TP-E331-10UGR	7200	ENGINE	TPE3110UGR513H	FAILED	20050131006	PNR	PW150A	7920	NO.2 ENGINE	20050228001	NCR						
TP-E331-10UGR	7900	ENGINE	TPE3110UGR516H	FAILED	20050131007	PNR	PW206B	7321	FUEL MANAGEMENT	20050307004	QUE						
TP-E331-10UGR	8300	ACCESSORY DRIVE	31024001	STUD FAILURE	20050217003	ONT	PW206C	7250	ENGINE	20050112005	QUE						
TP-E331-11U612G	6100	PROP CARBON SEAL	31025751	CRACKED	20050204003	ONT	PW305A	7532	P2.8 SENSE LINE	30B1695	BROKEN						
TP-E331-6-252B	7240	PLUNGE	8939735	CRACKED	20050321006	QUE	PW305A	7920	ENGINE	20050126009	QUE						
GENERAL ELECTRIC																	
CF34-3B	7510	ENGINE ANTIHE VAVE	601970977	DOES NOT OPEN	20050322004	QUE	PW306A	7200	ENGINE	20050221009	QUE						
INTERNATIONAL AERO																	
V2500-A1	7230	ENGINE	20050321004	ONT	PW530A	7200	ENGINE	20050224010	QUE								
PRATT & WHITNEY-CAN																	
JT15D-1A	7210	ENGINE	20050213005	QUE	3 SDRs	ATL	PW545A	7200	FUEL CONTROL UNIT	20050126004	QUE						
PT16	7100	ENGINE	20050126001	QUE	PW545B	7200	HYDROMECH.FUEL	8237006	FAILED								
PT16A-11AG	7200	ENGINE	20050323004	QUE	R-2800	8540	BOLT	27225	BROKEN	20050222011	PNR						
PT16A-11A	0000	ENGINE	20050126005	QUE	PRATT & WHITNEY-USA												
PT16A-11A	7200	ENGINE	20050126005	QUE	JT8D-15	7920	TUBE ASSEMBLY	81196501	SEPARATED	200501218003	ONT						
PT16A-11A	7230	RETAINING RING	3020159	DEFORMED	JT8D-17	7920	OIL FILTER HOUSING	MS124776	LOOSE	20050310109	PNR						
PT16A-11A	7250	ENGINE	20050317003	ONT	JT8D-17	7932	STUD	547344P3	LOOSE	20050223001	ONT						
PT16A-11A	7931	ENGINE	20050211002	ATL	JT8D-219	7200	ENGINE	20050228003	QUE								
PT16A-135	7200	ENGINE	20050224011	QUE	JT8D-9A	7230	NO. 2 ENGINE	20050128004	ONT								
PT16A-135	7314	FUEL CONTROL UNIT	252444993	FAILED	PW4060	7932	ENGINE	16475	CRACKED	20050125003	QUE						
PT16A-21	7314	FUEL CONTROL UNIT	20050307002	QUE	R-985-AN-14B	0000	CRANKCASE	2 SDRs	PAC								
PT16A-27	0000	ENGINE	20050323007	QUE	R-985-AN-14B	7921	OIL COOLER	20050223008	PNR								
PT16A-28	0000	ENGINE	20050323007	QUE	R-985-AN-14B	8530	CYLINDER	20050311001	PAC								
PT16A-28	7210	ENGINE	20050315000	ATL	ROLLS ROYCE - GY												
PT16A-28	7310	FUEL CONTROL UNIT	252444076	OVERHAULED UNIT	20050207006	PAC	DART 534-2	7314	FUEL PUMP	GB3173CE	20050309007	ONT					
PT16A-28	7323	OVERSPEED GOVERNOR	210631	QUE	2 SDRs	QUE	TELEDYNE CONTINENTAL										
PT16A-34	6122	ENGINE	20050210008	QUE	GTSIO-520-H	8011	BEARING	535539	DESTROYED CAGE	20050125013	PNR						
PT16A-34	7200	ENGINE	20050117010	QUE	GTSIO-520-H	8530	PISTON	654724	BROKEN	20050216005	PAC						
PT16A-34	7240	LARGE EXIT DUCT	310926302	CRACKED, BURNT	IO-520-F	8520	CRANKCASE	654101A7R	UNSERVICEABLE	20050308015	PNR						
PT16A-34	7810	DUCT - TURBINE E	311178001	CRACKED	IO-520-F	8530	CYLINDER ASSY	TIST712ACA	CRACK	20050318004	PAC						
PT16A-34AG	7200	ENGINE	20050329005	QUE	IO-520-J	8520	CRANKCASE	CRACKED	20050305001	ATL							
PT16A-36	0000	ENGINE	20050110008	QUE	IO-550-D	7414	MAGNETOS BODY	SGRN1225	CRACKED	20050220303	QUE						
PT16A-41	7200	ENGINE	20050110008	QUE	O-200-A	8530	EXHAUST VALVE	654004	CORRODED	20050126003	ONT						
PT16A-41	7600	TUBE ASSY	1009200423	UNSERVICEABLE	O-300-C	8530	PISTON	654853B	SCRAPPED	20050324008	ONT						
PT16A-42	7230	GAS GENERATOR CAP	01R3028332	CRACKED	TSIO-520-M	8520	COUNTERWEIGHT	639196	FAILED	20050324006	ONT						
PT16A-50	7210	ENGINE	20050301004	QUE	TURBOMECA												
PT16A-50	7230	ENGINE	20050211003	ATL	ARRIEL 1B	7310	RH PIPE SUPPLY	0301007220	CRACKED	20050315005	PNR						
PT16A-50	7250	ENGINE	20050213007	QUE	ARRIEL 1B	7532	SCREEN	0301007860	CRACKED/CHAFED	20050202002	ATL						
PT16A-50	7931	ENGINE OIL PRESSURE	20050110006	QUE	ARRIEL 1D1	7200	ENGINE	FAILED	20050323002	QUE							
PT16A-60A	7200	ENGINE	20050213003	QUE	ARRIEL 2B	7314	SEAL,VARILIP	TPZA10063T251V	LEAKING FUEL	20050322002	ONT						
PT16A-60A	7532	BLEED VALVE	310317401	VISUALLY NORMAL	20050210005	PNR	propellers										
PT16A-67D	7210	ELBOW	310047001	FRACTURED	20050217003	ONT	HAMILTON STANDARD										
PT16A-67D	7210	ENGINE	20050213002	QUE	14SF-19	6120	RETAINER, UNIVER	7827402	LOOSE	20050218002	ONT						
PT16A-67D	7261	ENGINE	20050201004	QUE	HARTZELL												
PT16A-68	7200	ENGINE	20050213003	QUE	20050127006	QUE	HC-B3TN-3BY	6120	CSU	210574AB	FAILED						
PT16B-36A	2820	FUEL MANIFOLD TUBE	3020030	WORN	20050307001	QUE	HC-B3TN-3D	6114	BEARING RACE	A1851T	CRACKED						
PT16B-37A	0000	EGU	101250003	SUSPECT	20050214002	QUE	HC-B4TN-5GL	6110	PROPELLER	HCB4TN5GL	LEAKING						
PT16B-37B	7320	PNEUMATIC TUBE (3017383	FRACTURED	20050228013	QUE	HC-B4TN-5GL	6112	DE-ICER	AE11887	WRONG LOCATION						
PT16B-37B	7600	ENGINE CONTROLS			20050329004	QUE	HC-E3YR-2ATF	6122	CONTROL ROD END	469153	BROKEN						
PT16B-37B	7250	ENGINE	20050117011	QUE	20050117011	QUE	MCCAULEY										
PT16B-37B	7300	NIL/UNKNOWN			2 SDRs	QUE	D2A34C58	6114	HUB	D4715	CRACKED	20050316005	ONT				
PW118	0000	ENGINE	20050105011	QUE	D2A34C58	6114	PROPELLER	20050317005	PAC								
PW118	7313	PACKING - FUEL	20050223002	QUE	1A103/TCM6958	0000	PROPELLER	20050323008	PAC								
PW119	7210	ENGINE	20050307009	QUE	2A34C66	6111	BLADE	20050316004	ONT								
PW119	7200	ENGINE	20050223002	QUE	3GFR34C701	0000	PROP BLADE	20050331002	ONT								
PW120	7200	ENGINE	20050307009	QUE													
PW121	7920	ENGINE															
PW122	7200	ENGINE															
PW123	7250	HPT BLADES	311560101	FRACTURE													
PW123	7310	MECHANICAL FUEL															

MAKE/MODEL	JASC	PART NAME	PART NO.	PART CONDITION	SDR NO.	RGN
------------	------	-----------	----------	----------------	---------	-----

equipment

BOMBARDIER 21564075	2810	FUEL RUBBER TANK	21564075	REPAIR	20050216004	QUE
JANITROL AER A23D04	0000	HEATER REGULATOR	A23D04	LEAK	20050316007	PNR
NORTHERN AIR 251XXX	2340	PRINTED CIRCUIT	25091	FAILED	20050120004	PAC
POINTER INDU PS400010	0000	EMERGENCY LOCATOR			20050322006	PNR
THOMPSON TC173007	0000	NIL/UNKNOWN			20050128006	PAC
UNKNOWN OB30	3530	OXYGEN BOOSTER	OB30	FAILED	20050309004	PNR

.....

LEGEND

JASC Joint Aircraft System Code number defining assembly/system/component
SDR NO. TCA assigned SDR control number - please quote in any correspondence or inquiries
RGN TCA region of SDR submitter:

PAC = Pacific,
ONT = Ontario,
ATL = Atlantic,
VAR = more than one Region

PNR = Prairie Northern,
QUE = Quebec,
NCR = Ottawa (HQ),



Transport Canada Civil Aviation

Transport Canada Continuing Airworthiness

WWW Aviation Information

www.tc.gc.ca/civilaviation/menu.htm

Canada

Canadian Aviation Regulations (CARs)
www.tc.gc.ca/civilaviation/regservaffairs/cars/menu.htm

Airworthiness Directives
www.tc.gc.ca/CivilAviation/certification/continuing/ad.htm

Service Difficulty Alerts
www.tc.gc.ca/CivilAviation/certification/continuing/Alert/menu.htm

Service Difficulty Advisories
www.tc.gc.ca/CivilAviation/certification/continuing/Advisory/menu.htm

Web Service Difficulty Reporting System (WSDRS)
www.tc.gc.ca/wsdrs/

Airworthiness Notices
www.tc.gc.ca/civilaviation/maintenance/aarpic/ans/menu.htm

Airworthiness Manual Advisory Index
www.tc.gc.ca/CivilAviation/certification/guidance/menu.htm

Aircraft Maintenance & Manufacturing Staff Instructions (MSI)
www.tc.gc.ca/civilaviation/maintenance/aarpic/msi/menu.htm

Aircraft Maintenance and Manufacturing Policy Letters (MPPL)
www.tc.gc.ca/civilaviation/maintenance/aarpic/mpl/menu.htm

feedback

contact information contact information contact information

headquarters **headquarters** **headquarters**

Transport Canada Civil Aviation, Continuing Airworthiness AARDG
Place de Ville, Tower C, 330 Sparks Street, Ottawa, ON K1A 0N8
Tel: (613) 952-4357, Fax: (613) 996-9178

regional offices

Atlantic

Transport Canada
P.O. Box 42
95 Foundry St., 6th Floor
Moncton, NB
E7C 8K6
(506) 851-7114

Prairie and Northern

Transport Canada
344 Edmonton Street
Winnipeg, MB
R3C 0P6
(204) 983-3152
1-888-463-0521

Ontario

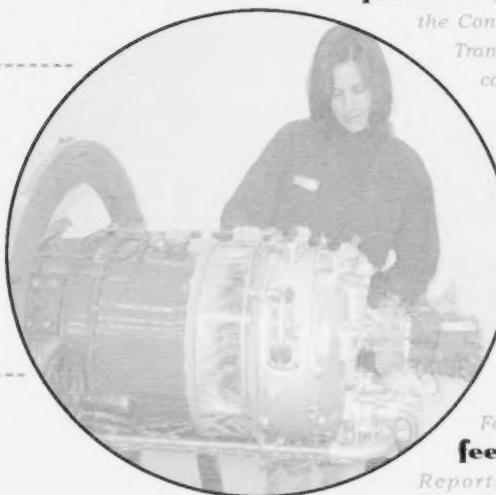
Transport Canada
4900 Yonge St., Suite 300
Willowdale, ON
M2N 6A5
(416) 952-0352

Quebec

Transport Canada
700 Leigh Crepole
Dorval, QC
H4Y 1G7
(514) 633-3319

Pacific

Transport Canada
800 Burrard St., Suite 620
Vancouver, BC
V6Z 2J8
(604) 666-8777



feedback (TP 6980E) is published quarterly by the Continuing Airworthiness Division of Transport Canada, informing the aviation community of reported day-to-day problems that affect aircraft airworthiness in Canada.

The articles contained in **feedback** are derived from Service Difficulty Reports (SDRs) submitted by Aircraft Maintenance Engineers (AMEs), owners, operators and other sources.

For additional information concerning **feedback** or the Service Difficulty Reporting Program, contact your nearest Transport Canada Centre.

Where to find us in cyberspace

<http://www.tc.gc.ca/civilaviation/certification/menu.htm>



Léo N.J. Maisonneuve
Manager
Information Programs
Tel: (613) 952-4352
maisole@tc.gc.ca



T.A. McNamara
Editor
Information Programs
Tel: (613) 952-4360
mcnamat@tc.gc.ca



B. Goyaniuk
Chief
Continuing Airworthiness
Tel: (613) 952-4356
goyanib@tc.gc.ca

Canada